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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,421	11/03/2003	Hiroshi Igarashi	244686US-3 CONT	3430

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EXAMINER
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MONBLEAU, DAVIENNE N

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**Application No. **10/698,421**

Applicant(s)

IGARASHI ET AL

Examiner

Davienne Monbleau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/3/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The IDS filed on 11/3/03 has been acknowledged and a signed copy of the PTO-1449 is attached herein.

### ***Drawings***

Figures 7A, 7B, 8, and 9 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

Regarding page 34, lines 17-20, according to the drawings, it is not clear whether the rod is reference # 37 or 47, since there is no reference # 47 in the drawings.

### ***Claim Objections***

The following comments pertain to minor grammatical errors and suggestions for maintaining claim language consistency:

Claim 1, the phrase "determining whether a wafer is present ... fixed to a wafer processing apparatus" is not grammatically correct.

Claim 1 line 8: "the vertical" should be changed to -- a vertical -- .

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Claim 1 line 9: "said sensor" should be changed to -- said first sensor -- .

Claim 1 line 13: "second sensor" should be changed to -- second sensors -- .

Claim 2 line 2: the phrase "located underside of lower edge" is grammatically incorrect.

Claim 3 line 2: "with a door" should be changed to -- to a door -- .

Claim 3 lines 2-3: the phrase "apart said lid from said box" is grammatically incorrect.

Claim 4 lines 2-3: the phrase "apart said lid from said box" is grammatically incorrect.

Claim 5 line 3: "bys said lid" should be changed to -- by said lid -- .

Claim 6 line 3: "bys said lid" should be changed to -- by said lid -- .

Claim 7 line 3: "bys said lid" should be changed to -- by said lid -- .

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 1 line 13, the phrase "vertical movement of said sensor" is vague because it is not clear which sensor is being referred to.

Claims 2-7 are rejected as being dependent on an indefinite base claim.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686

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F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

*Claims 1-4 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 10, 14, and 18 of copending Application No. 10/301,841 (App '841).*

Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations that were not specifically claimed would have been obvious to one of ordinary skill in the art.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Regarding Claim 1, *App '841* claims a wafer mapping apparatus for determining whether a wafer is present or not on each of shelves when a pod having a box which has an opening and the shelves for taking custody of the wafer in parallel along a vertical direction and a lid separably covering said opening is fixed to a wafer processing apparatus (Claim 14 lines 1-6), said wafer mapping apparatus comprising a first sensor for determining whether the wafer is present or not on shelves (Claim 14 lines 8 and 20-21), a mapping frame for supporting said first sensor (Claim 14 lines 7-8), a movable portion for supporting said first sensor movable in the vertical direction through said mapping frame in a state in which said sensor is plunged into said box (Claim 14 lines 18-23), a timing plate having index means disposed at predetermined

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intervals (Claim 18 line 3), and second sensors provided so as to sandwich said index means therebetween (Claim 18 lines 4-5). *App '841* further claims that said index means are formed in accordance with said shelves of said box (Claim 18 lines 5-6), but does not claim that a signal in response to each of said shelves is generated by said timing plate and said second sensor in accordance with a vertical movement of said sensor. However, because said index means are aligned with said shelves and said index means is between the second sensor, it is obvious that the location of the shelves is being detected and hence a signal being created.

Regarding Claim 2, *App '841* claims that said mapping frame arm supporting member is located below an underside of the pod (Claim 10 lines 3-4). The movable member is connected to the mapping frame via said mapping frame arm. Thus, the movable member, as well as the attached second sensors, is also below an underside of the pod.

Regarding Claims 3 and 4, *App '841* claims that said movable portion may be connected to the door (Claim 1 line 30) which holds said lid of said pod (Claim 1 lines 7-8) and moves said lid substantially below said box.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

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evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

*Claims 1-4, to the extent taught and understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Figure 7A and 7B (APA Figure 7) in view of Schlehahn et al. (U.S. 6,419,439).*

Regarding Claim 1, *APA Figure 7* teaches a wafer mapping apparatus for determining whether a wafer is present or not on each of shelves when a pod (1) having a box which has an opening and the shelves for taking custody of the wafer in parallel along a vertical direction and a lid (4) separably covering said opening is fixed to a wafer processing apparatus, said wafer mapping apparatus comprising a first sensor (9a, 9b) for determining whether the wafer is present or not on shelves, a mapping frame (5) for supporting said first sensor (9a, 9b), and a movable portion (56) for supporting said first sensor (9a, 9b) movable in the vertical direction through said mapping frame (5) in a state in which said sensor (9a, 9b) is plunged into said box. *APA Figure 7* does not teach a timing plate having index means. *Schlehahn* teaches in column 3 lines 6-25 indexing means disposed at predetermined intervals (distance between transmitter and receiver), wherein a signal in response to each of said shelves is generate by said indexing means. It would have been obvious to one of ordinary skill in the art at the time of the invention to use indexing means in *APA Figure 7*, as taught by *Schlehahn*, to differentiate between various standardized magazine (shelves) and wafer formats. (See *Schlehahn* column 2 lines 48-53).

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Although *Schlehahn* does not teach a fixed timing plate with indexing means, the sensor scanning each shelf vertically produces the same indexing result.

Regarding Claim 2, *APA Figure 7* teaches that said movable portion (56) is located on an underside of the opening of the pod (1) and are provided within a substantially closed spaced. *Schlehahn* does not teach that said index means (second sensor) is below said opening of said pod (1). However, lacking any criticality, the index means in *Schlehahn* provides the same function despite its different location.

Regarding Claims 3 and 4, *APA Figure 7* teaches that said movable portion (56) may be connected to a door (6) which holds said lid (4) of said pod (1) and moves said lid substantially below said box.

*Claims 5-7, to the extent taught and understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over APA Figure 7 in view of Schlehahn, as applied to Claim 1 above, and further in view of Wang et al. (U.S. 6,452,201).*

Regarding Claims 5-7, *APA Figure 7* teaches that said first sensor (9a, 9b) is plunged into said pod opening, but does not teach that said mapping frame (5) is tilted away from a plane forming said opening of said pod (1). *Wang* teaches in Figure 4 a wafer mapping apparatus wherein said mapping frame (150), although not tilted, is in a different vertical plane from said pod opening. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a mapping frame arm in *APA Figure 7*, as suggested by *Wang*, as an alternate means to effectively plunge the detector into said pod. Determining whether the mapping frame is tilted rather than parallel to the pod opening depends on the movement of the controlling arm of said mapping frame.



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**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

*Saeki et al. (US 6,053,983), Otaguro (US 6,470,927), Rush et al. (US 6,655,423), and Miyajima et al. (JP 2001284439)* each teach various wafer mapping apparatuses.


*Birkner et al. (U.S. 5,605,428), Hahn et al. (U.S. 6,147,356) and Roessler et al. (U.S. 6,403,945)* teach wafer mapping apparatuses comprising indexing means.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davienne Monbleau whose telephone number is 571-272-1945. The examiner can normally be reached on Mon-Fri 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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